UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,079	11/19/2001	Robert A. Roth	DP-306071	9447

7590 06/29/2004

VINCENT A. CICHOSZ
DELPHI TECHNOLOGIES, INC.
Legal Staff, Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER	
RIVELL, JOHN A	

ART UNIT	PAPER NUMBER
3753	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/992,079	ROTH, ROBERT A.	
	Examiner	Art Unit	
	John Rivell	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/25/04 (RCE)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 25, 2004 has been entered.

Claims 8-9 have been canceled. Claims 1-7 and 10-20 remain pending.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gimby in view of Feinberg.

The recitation "for a fuel pump" and all references to "fuel" are deemed statements of intended use bearing no patentable weight. Further the recitation "adapted to be disposed in an outlet member of the fuel pump" in addition to the intended use is considered to be language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure and so does not limit the scope of a claim or claim limitation.

The patent to Gimby discloses "a check valve... comprising: a valve housing (V); a valve seat (E) formed on an interior surface of said valve housing, a valve member (at 12, 14) disposed in said valve housing and having a closed position (shown in fig. 2) to operatively engage said valve seat (E) to prevent (fluid) from flowing through the outlet member and an open position to allow (fluid) to flow through the outlet member; and said valve member (12, 14) having an end adjacent said valve seat (E) with an annular

groove (18) having a generally circular cross-sectional shape extending radially into said end, a seal (20) disposed in said groove (18) for contacting said valve seat (E as shown in fig. 2)".

The patent to Gimby thus discloses all the claimed features with the exception of having "a single outlet port disposed below said groove to allow flow from said valve member when said valve member is in said open position".

The patent to Feinberg discloses that it is known in the art to employ a single radial outlet port 35, or 36 in a reciprocating valve member conducting fluid flow from a hollow interior of the valve member to the exterior of the valve member upon the valve member moving to an open position for the purpose of providing a designed low rate through the valve (column 3, lines 24-41).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Wynn a single port of designed size for the purpose of employing a designed low flow rate as recognized by Feinberg.

Regarding claim 2,in Gimby, "said valve housing (V) has a passageway (O) extending axially therethrough to receive said valve member" as recited.

Regarding claim 3, in Gimby, "said valve housing (V) has an enlarged opening (at E) at one end of said passageway" as recited.

Regarding claim 4, in Gimby, "said valve member (12, 14) has a flow port (26) extending axially into one end thereof" as recited.

Regarding claim 5, in Gimby, as modified by Feinberg, "said outlet port extends radially through said valve member and communicates with said flow port" as recited.

Regarding claim 6, in Gimby, "a spring (24 is) disposed about said valve member (12, 14) to urge said valve member toward said valve seat (E)" as recited.

Regarding claim 7, in Gimby, "said spring (24) comprises a coil spring" as recited.

Regarding claim 10, in Gimby, "said seal (20) is made of an elastomeric material" as recited.

Regarding claim 11, the recitation "for a fuel pump" and all references to "fuel" are deemed statements of intended use bearing no patentable weight. Further the recitation "adapted to be disposed in an outlet member of the fuel pump" in addition to the intended use is considered to be language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure and so does not limit the scope of a claim or claim limitation.

The patent to Gimby discloses "a check valve... comprising: a valve housing (V) adapted to be disposed in an outlet member...; a valve seat (E) formed on an interior surface of said valve housing (V); a valve member (12, 14) disposed in said valve housing (V) and having an end adjacent said valve seat (E) with an annular groove (18) having a generally circular cross-sectional shape extending radially into said end and including a seal (20) disposed in said groove (18), said valve member (12, 14) having a closed position (fig. 2) in which said seal (20) engages said valve seat (E) to prevent (fluid) from flowing through the outlet member and an open position to allow (fluid) to flow through the outlet member" as recited in claim 11.

Thus the paten to Gimby discloses all the claimed features with the exception of "having a single outlet port to allow flow from said valve member when said valve member is in said open position"

The patent to Feinberg discloses that it is known in the art to employ a single radial outlet port 35, or 36 in a reciprocating valve member conducting fluid flow from a hollow interior of the valve member to the exterior of the valve member upon the valve member moving to an open position for the purpose of providing a designed low rate through the valve (column 3, lines 24-41).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Wynn a single port of designed size for the purpose of employing a designed low flow rate as recognized by Feinberg.

Regarding claim 12 in Gimby, "said valve housing (V) has a passageway (O) extending axially therethrough to receive said valve member (12, 14)" as recited.

Regarding claim 13, in Gimby, "said valve housing (V) has an enlarged opening (at E) at one end of said passageway" as recited.

Regarding claim 14, in Gimby, "said valve member (E) has a flow port (26) extending axially into one end thereof" as recited.

Regarding claim 15, in Gimby, as modified by Feinberg, "said outlet port extends radially through said valve member and communicates with said flow port" as recited.

Regarding claim 16,in Gimby, "a spring (24 is) disposed about said valve member (12, 14) to urge said valve member (12, 14) toward said valve seat (E)" as recited.

Regarding claim 17,in Gimby, "said spring (24) comprises a coil spring" as recited.

Regarding claim 18, in Gimby, "said seal (20) is made of an elastomeric material" as recited.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gimby in view of Feinberg as applied to claims 1-7 and 10-19 above, further in view of Hoover.

The patent to Gimby, as modified by Feinberg, discloses all the claimed features with the exception of having "a fuel pump comprising an outlet member having a passageway therethrough (and) a valve housing disposed in said passageway of said outlet member.

The patent to Hoover discloses that it is known in the ad to employ a check valve device 28, located in the outlet conduit of a fuel pump 22 of a vehicle leading to an engine 26 of the vehicle for the purpose of preventing backflow of fuel from the engine to the fuel pump.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ the device of Gimby, as modified by Feinberg, as a check valve device in the outlet conduit of a fuel pump feeding fuel to an engine of a vehicle for the purpose of preventing backflow of fuel from the engine to the fuel pump as recognized by Hoover.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (703) 308-2599. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Rivell
Primary Examiner
Art Unit 3753